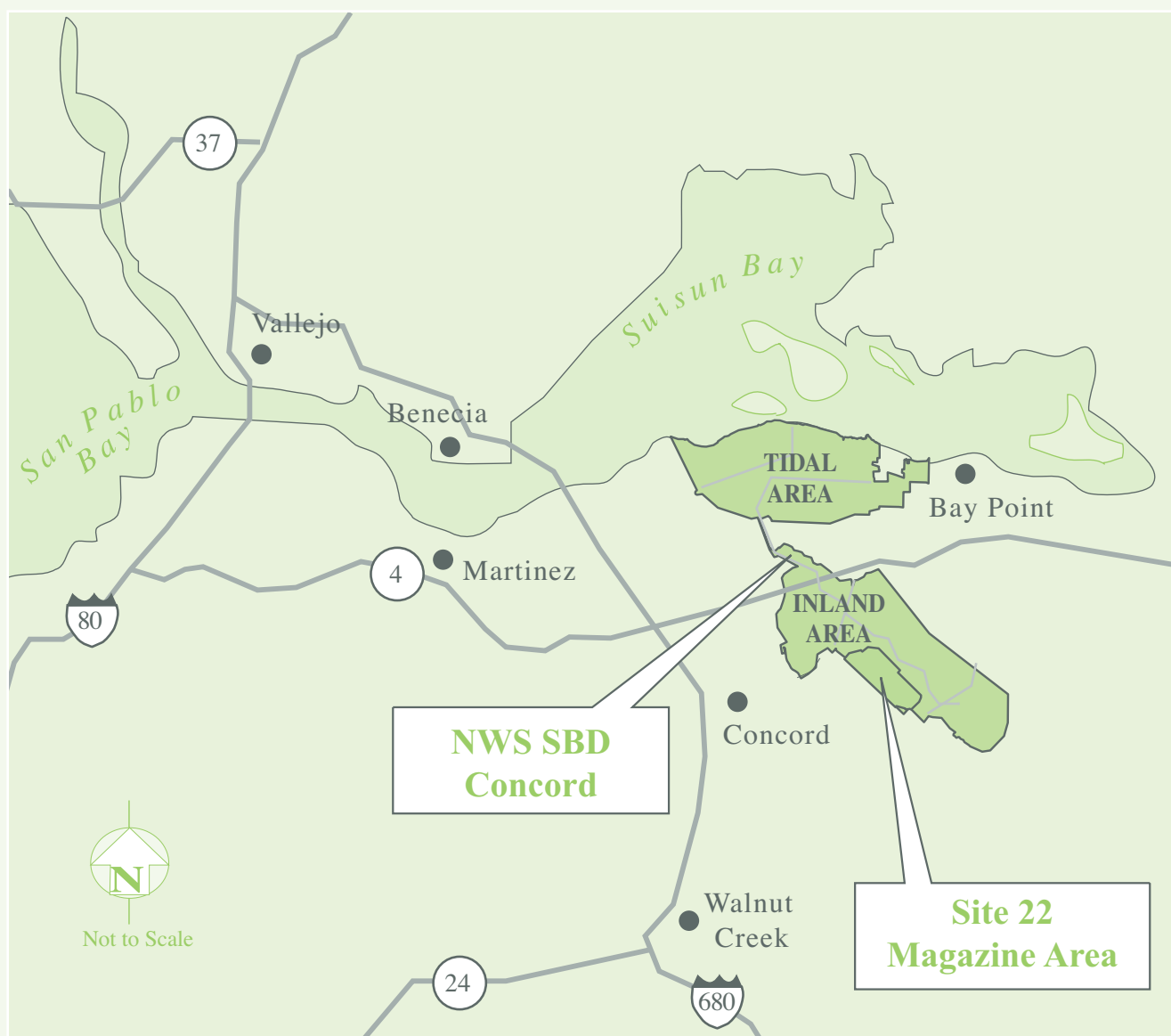
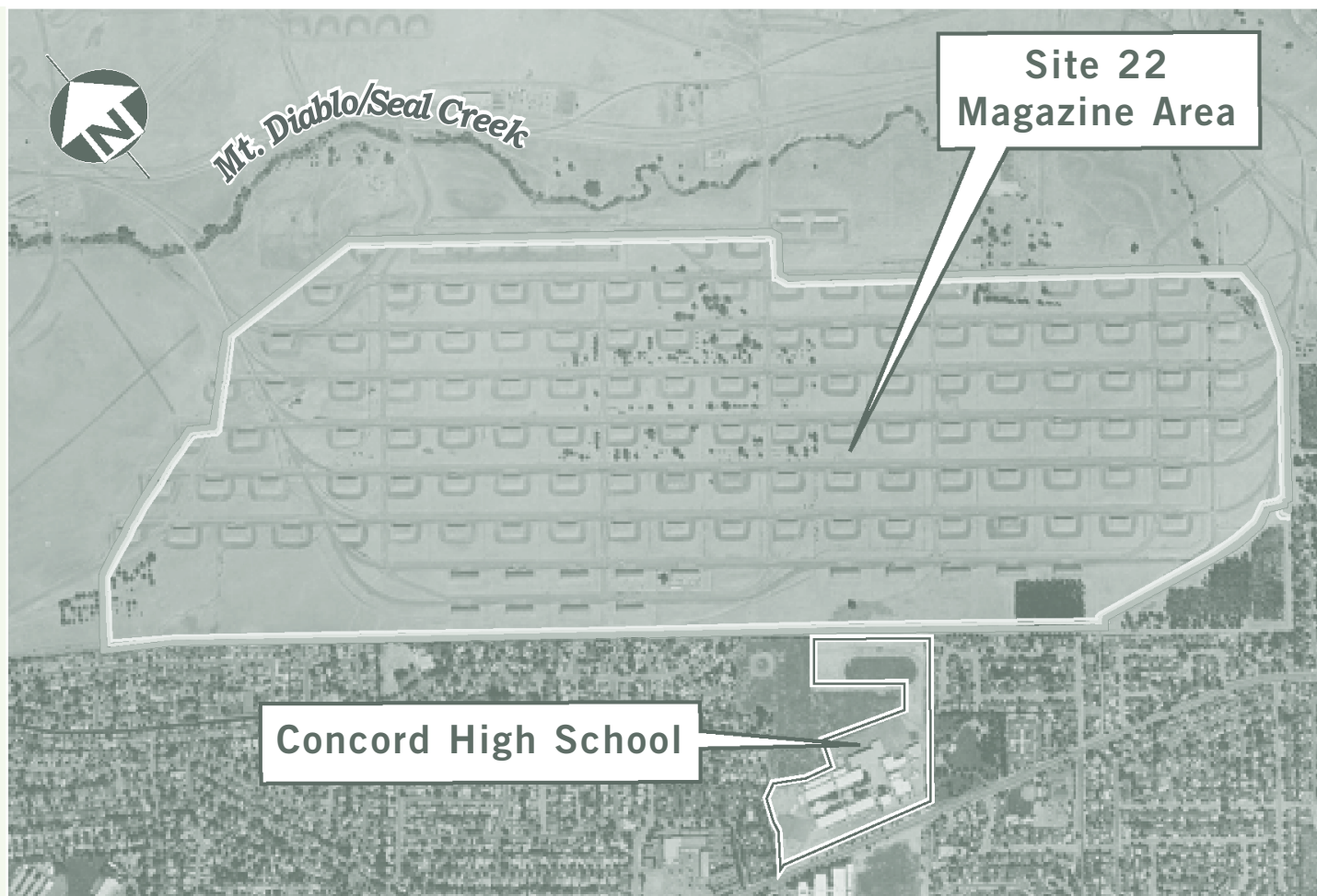


This fact sheet provides an update on environmental investigation and cleanup activities at the Magazine Area (Site 22), located in the Inland Area of Naval Weapons Station Seal Beach, Detachment Concord (NWS SBD Concord). Opportunities for public involvement in the investigation and cleanup process at the site are described on the back page of this fact sheet.





## HISTORY OF SITE 22

The Magazine Area is composed of 530 acres of grasslands that includes an array of more than 250 bunkers (or magazines) built in 1944 that the Navy formerly used to store munitions. The southwestern border of the Magazine Area is the boundary of the Navy property; beyond it are residential back yards and Concord High School. Since 2001, the structures at the site have been sealed and empty. Currently, the site is used only by ranchers to graze cattle and by the California Department of Fish and Game as a reserve for Tule Elk.

Environmental investigations have been conducted in various portions of the Magazine Area since 1983. In 2004, the Navy discovered that the level of arsenic, a common and naturally occurring metal, was elevated in surface soils throughout the site. Natural levels of arsenic in North American Soil range from 1 to 40 parts per million (ppm). In NWS SBD Concord Inland Area soils, natural levels of arsenic in soil range up to approximately 10 ppm. The levels of arsenic in surface soils at the Magazine Area, however, averaged 40 ppm and ranged from 4 to 210 ppm, indicating a human-related release of arsenic at the site. To date, arsenic has not been detected in groundwater or plant samples collected from the site.

The likely source of the arsenic identified at the Magazine Area is the Navy's past application, in the late 1940s, of an herbicide that contained arsenic for weed control. From the mid-19th century through the 1940s, inorganic arsenic compounds were the dominant pesticides and herbicides that farmers and fruit growers used. The U.S. Environmental Protection Agency (EPA) banned the use of most arsenic-containing pesticides and herbicides in the late 1980s. More information on arsenic is presented page 3.

## ATSDR PUBLIC HEALTH CONSULTATION

When the Navy discovered the elevated levels of arsenic in soil at the Magazine Area, as a precaution, it asked the Agency for Toxic Substances and Disease Registry (ATSDR) to independently evaluate the data and recommend methods, as appropriate, to protect public health. ATSDR is a federal agency directed by congress to perform public health assessments of waste sites along with other duties. ATSDR's public health consultation for the site looked at potential public exposure to arsenic from movement of arsenic off of Navy property. They concluded that there is no immediate threat to public health that should be addressed and that no further sampling was needed. ATSDR's public health consultation can be found on the Navy's website at <http://www.sbeach.navy.mil/ir/>.

## NAVY'S PROPOSED SAMPLING

Still, in response to requests from the base Restoration Advisory Board (RAB, a committee of interested citizens), and the Dana Estates Neighborhood Alliance, the Navy has volunteered to collect samples off-site in neighboring back yards and Concord High School along the southwestern border of the Magazine Area. The samples are to confirm that the arsenic application did not affect neighboring properties. There are no records to suggest that herbicides were ever applied off of Navy property, but the Navy is moving forward with plans to collect samples to confirm that off-site soils have not been impacted. In cooperation with the Navy, the RWQCB conducted surface water sampling at Mt. Diablo Creek to determine whether elevated arsenic was present in surface water. The highest detection of arsenic was 14 ppb, which is below the 36 ppb level considered protective of creek organisms.

The Navy's first step, a sampling plan, will likely be completed during the spring of 2005. It will be available for public review

and comment before it is finalized by the Navy (to get involved, see page 4). The Navy will coordinate with the Dana Estates Neighborhood Alliance and other interested parties for input on the proposed sampling plan.

The study will make an area-wide determination of soil arsenic levels. Representative soil samples will be collected from some residential backyards with minimal inconvenience to residents and neighbors. Sampling is planned for 2005, and a report that evaluates the results will be available in early 2006. The sampling plan and report will be prepared in coordination with and with the approval of the U.S. Environmental Protection Agency, the San Francisco Bay Regional Water Quality Control Board, and the California Department of Toxic Substances Control. The report will evaluate risk to human health and the environment. Also included in the report will be a separate sampling effort in Mount Diablo Creek to assess any impacts due to runoff from the site.

## ARSENIC QUESTIONS AND ANSWERS

### *What is arsenic?*

Arsenic is a naturally occurring metallic element that is widely distributed in the earth's crust. Arsenic is found throughout the environment. It is released through weathering of arsenic-containing minerals and ores, and by commercial or industrial processes.

### *How can arsenic affect my health?*

Arsenic has been recognized as a human poison since ancient times. Arsenic poisoning can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in the hands and feet. Ingesting or breathing arsenic for a long time can darken the skin and cause the appearance of small "corns" or "warts" on the palms, soles, and torso. Skin contact with arsenic may cause redness and swelling. Arsenic poisoning requires large doses to cause death (2 milligrams per kilogram of body weight per day, or 21 kilograms [46 pounds] of soil containing 210 milligrams of arsenic per kilogram of soil).

### *What happens to arsenic in the environment?*

Arsenic is an element, and so it cannot be destroyed. It can only change its form or become attached to or separated from other particles. Arsenic in soil or minerals may enter the air or water from wind-blown dust and may get into water from runoff and leaching. Arsenic in wind-borne soil generally settles to the ground or is washed out of the air by rain. Arsenic released to land is mostly inorganic and usually remains in place because it binds to soil rather than being taken up by plants or dissolved in rainwater runoff.

### *How can a person be exposed to arsenic?*

Eating food, drinking water, or breathing air that contains arsenic.

### *What are some prudent public health actions that people can take to reduce their potential exposure to arsenic?*

ATSDR's public health consultation for the site concluded that there is no immediate threat to public health, however, basic hygiene practices for contact with soil should be followed at any site. These include:

- Wear gloves while working with soil
- Do not eat, drink, or smoke while working with soil
- Wash and peel home grown produce before consumption
- Wash hands after working with soil or playing in the yard
- Maintain vegetative ground cover (such as grass)
- Leave work shoes outside to reduce the amount of soil brought into the house

### *Interested in knowing more about arsenic?*

If so, ATSDR's ToxFAQs website has more information on arsenic at: <http://www.atsdr.cdc.gov/tfacts2.html>

GREGG SMITH  
NAVY PUBLIC AFFAIRS OFFICER  
800 SEAL BEACH BLVD.  
SEAL BEACH, CA 90740-5000

#### *How can I get involved?*

The Navy is committed to involving the community in the environmental work at NWS SBD Concord. The Navy hosts monthly RAB meetings that are usually held on the first Wednesday of the month from 6:30 to 8:30 p.m. The Navy encourages the general public to attend and participate in both RAB meetings and meetings where the Navy is proposing base cleanup actions.

#### *RAB Meeting Location:*

Concord Police Department Community Room  
1350 Galindo Street  
Concord, California 94520

#### *Upcoming RAB Meeting Dates:*

- ❖ March 9, 2005
- ❖ April 6, 2005
- ❖ May 4, 2005
- ❖ June 1, 2005

#### *Contact Information*

Margaret Wallerstein (RAB Navy Co-chair)  
(562) 626-7838 or (925) 246-4020  
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Mary Lou Williams (RAB Community Co-chair)  
[mlou1015@aol.com](mailto:mlou1015@aol.com)

Gregg Smith (Navy Public Affairs)  
(562) 626-7215  
[gregg.smith@navy.mil](mailto:gregg.smith@navy.mil)

#### *Where can I get more information?*

If you have any questions about the Magazine Area (Site 22) or are interested in applying for RAB membership or being included on the Navy's mailing list, please call the Navy RAB Co-chair, Margaret Wallerstein, at (562) 626-7838 or leave a message at (925) 246-4020. Additional information is available at the Naval Weapons Station Seal Beach cleanup program website:  
<http://www.sbeach.navy.mil/ir/>.

An information repository has been established to provide public access to technical reports, RAB meeting minutes, newsletters, public meeting announcements and other items at the Concord Public Library, 2900 Salvio St, Concord, California 94519, Phone: (925) 646-5455.